

What is claimed is:

1. An electronic instrument having a magnetic sensor comprising:

a circular or substantially circular component that is susceptible to magnetization;

a magnetic sensor to output a signal corresponding to a direction of a magnetic field that is arranged in an arbitrary position in a distance within the area of approximately  $2^{-1/2}$  of the radius from the center of said circular or substantially circular component; and

a correcting circuit to correct the signal outputted from said magnetic sensor in accordance with the relative position between said component and said magnetic sensor.

2. An electronic instrument having a magnetic sensor comprising:

a circular or substantially circular component that is susceptible to magnetization;

a magnetic sensor to output a signal corresponding to a direction of a magnetic field that is arranged in an arbitrary position on a straight line passing the center of said component such that said straight line and a detection axis of magnetism coincide; and

a correcting circuit to correct the signal outputted from said magnetic sensor in accordance with the relative position between said component and said magnetic sensor.

3. An electronic instrument having a magnetic sensor comprising:

a circular or substantially circular component that is susceptible to magnetization;

an X axis magnetic sensor to detect a magnetic field component in an X axis direction that is arranged in an arbitrary position in a distance within the area of approximately  $2^{-1/2}$  of the radius from the center of said component, or is arranged such that a detection axis of said magnetic sensor overlaps an X axis passing through the center of said component in an arbitrary position on said X axis or on its extended line;

a Y axis magnetic sensor to detect a magnetic field component in a Y axis direction that is arranged in an arbitrary position in a distance within the area of approximately  $2^{-1/2}$  of the radius from the center of said component, or is arranged such that an detection axis of the magnetic sensor overlaps an Y axis passing through said component and perpendicular to said X axis in an arbitrary position on said Y axis or on its extended line; and

a correcting circuit to correct the signals outputted from said X axis magnetic sensor and said Y axis magnetic sensor in accordance with the relative position between said component and said X and Y magnetic sensors.

4. An electronic instrument having a magnetic sensor according to claim 1, wherein said component that is susceptible to magnetization is a battery made of stainless steel.

5. An electronic instrument having a magnetic sensor according to claim 2, wherein said component that is susceptible to magnetization is a battery made of stainless steel.

6. An electronic instrument having a magnetic sensor according to claim 3, wherein said component that is susceptible to magnetization is a battery made of stainless steel.

7. An electronic instrument having a magnetic sensor comprising:

a circular or substantially circular component assuming magnetism in the vicinity of its circumference by processing;

a magnetic sensor to output a signal corresponding to a direction of a magnetic field that is arranged in a position inside said vicinity of the circumference assuming magnetism of said circular or substantially circular component; and

a correcting circuit to correct the signal outputted by said magnetic sensor in accordance with the relative position between said component and said magnetic sensor.

8. An electronic instrument having a magnetic sensor comprising:

a circular or substantially circular component assuming magnetism in the vicinity of its circumference by processing;

a magnetic sensor to output a signal corresponding to a direction of a magnetic field that is arranged in an arbitrary position on a straight line passing the center of said component such that said straight line and a detection axis of magnetism coincide; and

a correcting circuit to correct the signal outputted from said magnetic sensor depending on the relative position between said component and said magnetic sensor.

9. An electronic instrument having a magnetic sensor comprising:

a circular or substantially circular component assuming magnetism in the vicinity of its circumference by processing;

an X axis magnetic sensor for detecting a magnetic field component in

the X axis direction that is arranged in a position inside said vicinity of the circumference assuming magnetism of said circular or substantially circular component, or is arranged such that a detection axis of said magnetic sensor overlaps an X axis passing the center of said component in an arbitrary position on the X axis or on its extended line;

a Y axis magnetic sensor for detecting a magnetic component in a Y axis direction that is arranged inside said vicinity of the circumference assuming magnetism of said circular or substantially circular component, or is arranged such that a detection axis of said magnetic sensor overlaps a Y axis passing the center of said component and perpendicular to said X axis in an arbitrary position on the Y axis or on its extended line; and

a correcting circuit to correct the signals outputted from said X axis magnetic sensor and said Y axis magnetic sensor.

10. An electronic instrument having a magnetic sensor according to claim 7, wherein said circular or substantially circular component is a battery made of stainless steel.

11. An electronic instrument having a magnetic sensor according to claim 8, wherein said circular or substantially circular component is a battery made of stainless steel.

12. An electronic instrument having a magnetic sensor according to claim 9, wherein said circular or substantially circular component is a battery made of stainless steel.

13. An electronic instrument having a magnetic sensor according to claim 1, wherein said magnetic sensor, said Y axis magnetic sensor or said X axis

magnetic sensor consists of a two axis magnetic sensor that is capable of measuring both the magnetic field components in said X axis direction and in said Y axis direction perpendicular to said X axis.

14. An electronic instrument having a magnetic sensor according to claim 2, wherein said magnetic sensor, said Y axis magnetic sensor or said X axis magnetic sensor consists of a two axis magnetic sensor that is capable of measuring both the magnetic field components in said X axis direction and in said Y axis direction perpendicular to said X axis.

15. An electronic instrument having a magnetic sensor according to claim 3, wherein said magnetic sensor, said Y axis magnetic sensor or said X axis magnetic sensor consists of a two axis magnetic sensor that is capable of measuring both the magnetic field components in said X axis direction and in said Y axis direction perpendicular to said X axis.

16. An electronic instrument having a magnetic sensor according to claim 7, wherein said magnetic sensor, said Y axis magnetic sensor or said X axis magnetic sensor consists of a two axis magnetic sensor that is capable of measuring both the magnetic field components in said X axis direction and in said Y axis direction perpendicular to said X axis.

17. An electronic instrument having a magnetic sensor according to claim 8, wherein said magnetic sensor, said Y axis magnetic sensor or said X axis magnetic sensor consists of a two axis magnetic sensor that is capable of measuring both the magnetic field components in said X axis direction and in said Y axis direction perpendicular to said X axis.

18. An electronic instrument having a magnetic sensor according to

claim 9, wherein said magnetic sensor, said Y axis magnetic sensor or said X axis magnetic sensor consists of a two axis magnetic sensor that is capable of measuring both the magnetic field components in said X axis direction and in said Y axis direction perpendicular to said X axis.

19. An electronic instrument having a magnetic sensor according to claim 1, wherein said electronic instrument is an electronic azimuth indicator, a wristwatch with an electronic azimuth indicator, a pressure gauge with an electronic azimuth indicator, a car navigation terminal apparatus, a portable electronic instrument with an electronic azimuth indicator, or an electronic instrument with an electronic azimuth indicator.

20. An electronic instrument having a magnetic sensor according to claim 2, wherein said electronic instrument is an electronic azimuth indicator, a wristwatch with an electronic azimuth indicator, a pressure gauge with an electronic azimuth indicator, a car navigation terminal apparatus, a portable electronic instrument with an electronic azimuth indicator, or an electronic instrument with an electronic azimuth indicator.

21. An electronic instrument having a magnetic sensor according to claim 3, wherein said electronic instrument is an electronic azimuth indicator, a wristwatch with an electronic azimuth indicator, a pressure gauge with an electronic azimuth indicator, a car navigation terminal apparatus, a portable electronic instrument with an electronic azimuth indicator, or an electronic instrument with an electronic azimuth indicator.

22. An electronic instrument having a magnetic sensor according to claim 7, wherein said electronic instrument is an electronic azimuth indicator, a

wristwatch with an electronic azimuth indicator, a pressure gauge with an electronic azimuth indicator, a car navigation terminal apparatus, a portable electronic instrument with an electronic azimuth indicator, or an electronic instrument with an electronic azimuth indicator.

23. An electronic instrument having a magnetic sensor according to claim 8, wherein said electronic instrument is an electronic azimuth indicator, a wristwatch with an electronic azimuth indicator, a pressure gauge with an electronic azimuth indicator, a car navigation terminal apparatus, a portable electronic instrument with an electronic azimuth indicator, or an electronic instrument with an electronic azimuth indicator.

24. An electronic instrument having a magnetic sensor according to claim 9, wherein said electronic instrument is an electronic azimuth indicator, a wristwatch with an electronic azimuth indicator, a pressure gauge with an electronic azimuth indicator, a car navigation terminal apparatus, a portable electronic instrument with an electronic azimuth indicator, or an electronic instrument with an electronic azimuth indicator.